

# **EXHIBIT 1**

**Corey S. Goodman, Ph.D.**

Adjunct Professor of Anatomy, and Biochemistry & Biophysics  
University of California, San Francisco

Managing Director and co-founder, venBio, LLC

Co-founder: Exelixis, Renovis, Second Genome, Ossianix

Born: June 29, 1951 in Chicago, Illinois; Married: December 8, 1984 to Marcia Barinaga

Dr. Goodman is a renowned scientist, educator, entrepreneur, CEO, and corporate executive. With a B.S. from Stanford University and Ph.D. from U.C. Berkeley, he spent 25 years as professor of biology at Stanford and Evan Rauch Chair of Neurobiology at Berkeley, where he was Howard Hughes Medical Institute Investigator and co-founder and director of the Wills Neuroscience Institute. He is currently an adjunct professor at U.C. San Francisco.

Dr. Goodman is an elected member of the National Academy of Sciences, American Academy of Arts and Sciences, and American Philosophical Society, and the recipient of many honors including the Alan T. Waterman Award, the Canada Gairdner Biomedical Award, the March-of-Dimes Prize in Developmental Biology, the Reeve-Irvine Research Medal, and the Dawson Prize in Genetics from Trinity College Dublin.

Dr. Goodman moved into biotechnology to help apply biomedical discoveries to human health. He co-founded Exelixis, Renovis, Second Genome, and Ossianix, and led Renovis as President and CEO (2001) from a private to public company (2004) until its acquisition by Evotec (2007). In 2007, he was recruited as President and founder of Pfizer's Biotherapeutics and Bioinnovation Center and a member of Pfizer's executive leadership team, based on a new entrepreneurial R&D model of small units at major biotech hubs fostering innovative drug discovery and game-changing technology.

Today Dr. Goodman is Managing Director and co-founder of venBio, a venture capital firm investing in biotech companies with innovative therapeutics for major unmet medical needs, based on a new model of strategic collaboration in partnership with Amgen, Baxter, and PPD. He is Chair of the Board of three biotech companies, Board member of two others, and advises others.

Amongst his many public policy roles, Dr. Goodman is on the Board of the California Council on Science and Technology, Pacific Institute, Bay Area Science and Innovation Consortium, and is former Chair of the National Research Council's (NAS) Board on Life Sciences and past President of the McKnight Endowment Fund for Neuroscience. He is an advisor to numerous biomedical foundations, and a member of the editorial board of Science Translational Medicine and Neuron.

Dr. Goodman was born in Chicago. He and his wife Marcia Barinaga have lived in West Marin, California since 1993. Marcia oversees Barinaga Ranch, their farmstead sheep dairy, and produces artisanal sheep cheese in her family's Basque tradition.

**Education**

Postdoctoral studies, U.C. San Diego, developmental neurobiology, Helen Hay Whitney Fellow (adv.: Nicholas Spitzer)	1977-1979
Ph.D., U.C. Berkeley, neurobiology, NSF Fellow (adv.: Hugh Rowell)	1972-1977
B.S., Stanford University, biology, Searle Scholar (adv.: Donald Kennedy) graduated Phi Beta Kappa, Distinction, Department Honors	1968-1972

**Academia Appointments**

University of California, San Francisco Adjunct Professor of Anatomy and Biochemistry & Biophysics	2007-
University of California, Berkeley Adjunct Professor of Neurobiology, Dept. of MCB	2005-2007
Professor on leave, Div. of Neurobiology, Dept. of MCB	2001-2005
Director, Helen Wills Neuroscience Institute	1999-2001
Member, Wills Neuroscience Institute	1997-2007
Co-founder (w/ Carla Shatz), Helen Wills Neuroscience Institute	1997
Head, Division of Neurobiology, Dept. of MCB	1992-1999
Professor, Div. of Neurobiology, Dept. of MCB	1992-2005
Professor, Div. of Genetics, Dept. of Mol. and Cell Biology	1989-1992
Professor, Depts. of Biochemistry and Physiology-Anatomy	1987-1989
Howard Hughes Medical Institute, Investigator	1988-2001
Cold Spring Harbor, Instructor, Developmental Neurobiology course	1986, '88, '90
Stanford University Associate Professor (tenured 1982), Dept. of Biological Sciences	1982-1987
Assistant Professor, Dept. of Biological Sciences	1979-1982

**Industry Appointments**

venBio, LLC, Managing Director and co-founder	2009-
Pfizer, President, Biotherapeutics & Bioinnovation Center, and Member, Pfizer Executive Leadership Team	2007-2009
Renovis, President and Chief Executive Officer, and Director	2001-2007

**Academia, Foundation, and Public Policy Boards**

Member, California Institute for Regenerative Medicine (CIRM) President's Strategic Industry Advisory Council	2011-
Member, Stanley Center for Psychiatric Research, MIT / Harvard, Scientific Advisory Board	2009-
Member, Pacific Institute Board of Directors	2009-
Member, Stanford's BioX Interdisciplinary Biosciences Advisory Council	2008-2011
Member, QB3 (UCSF-UCB-UCSC) Industry Advisory Board	2007-
Member, California Council on Science and Technology	2007-
Chair, Innovation Task Force, California Council on Science & Technology	2006
Spinal Muscular Atrophy Foundation, Member, Scientific Advisory Board	2005-
Christopher Reeve Paralysis Found., Member, Research Planning Comm.	2002-2005
Hong Kong University of Science and Technology, member, International Advisor Board of the Molecular Neurosci. Center	2000-2010
Institute of Neuroscience, Shanghai, Advisory Board member	2000-2006
Reeve-Irvine Research Center, U.C. Irvine, Advisory Board member	2000-2005

Exploratorium, Scientific Advisor, NSF Traits of Life project	1999-2002
Jane Coffin Childs Fund for Medical Research, Scientific Advisory Board	1998-2001
National Academy of Sciences	
Chair, Neurobiology Section (#24)	1998-2001
Member, Class Membership Committee	1998-2000, 2005
National Research Council	
Chair, Board on Life Sciences	2001-2006
Member, Commission on Life Sciences	1998-2000
Member, Board on Biology	1996-2000
Member, Research Opportunities in Biology, Subcommittee on Growth and Development	1987
Society for Neuroscience	
Councilor	1996-2000
Public Information Committee	1995-1999
Nominating Committee	1992
PEW Scholars Program, Scientific Advisory Committee	1993
Searle Scholars Program, Scientific Advisory Committee	1988-1992
McKnight Foundation Endowment Fund for Neuroscience	
President	2000-2005
Vice President	1998-2000, 2005-2008
Board of Directors	1986-
Chair, Scholars Award Committee	1989-1997
Member, Scholars Award Committee	1984-1997
Cold Spring Harbor Laboratory, Neurobiology Advisory Board	1984-1990
American Cancer Society, California Division, Fellowship Committee	1984-1987
NIH Neurobiology Study Section Member	1981-1982

### **Industry Boards**

Biotechnology Industry Organization (BIO),	
member, Health Section Governing Body	2008 -2009
member, Emerging Company Section (ECS) Governing Body	2005-2007
Bay Area Science and Innovation Consortium (BASIC), member, BOD	2006-
BayBio, member, Board of Directors	2005-
Compugen, scientific and business advisor	2009-
NuMedii, Chair, Board of Directors	2010-2012
Ossianix, Chair, Board of Directors	2010-
Co-Founder (w / Frank Walsh)	
Mirna Therapeutics, Member, Board of Directors	2009-
Neurotherapeutics Pharma, Member, Board of Directors	2009-
Oligasis, Chair, Board of Directors	2009-
Second Genome, Chair, Board of Directors	2009-
Co-Founder (w / Gary Anderson, John Hulls, Thane Kreiner)	2009-
iPierian, Chair, Board of Directors	2009-2011
Limerick, Board of Directors	2007-2012
Chair, Board of Directors	2009-2012
Evotec, Board of Directors	2008-2010
Vice Chair, Board of Directors	2009-2010
Chiron, member, Science Board	2005-2006

Renovis	
Member, Board of Directors	2001-2008
Co-Chair, Scientific Advisory Board	2000-2001
Co-Founder (w/ Marc Tessier-Lavigne, Tito Serafini, Ed Penhoet)	2000
Exelixis	
Member, Scientific Advisory Board	1995-2001
Co-Founder	
(w/ Spyros Artavanis-Tsakonas, Gerry Rubin, Stelios Papadopoulos)	1995
Teijin Limited, consultant for neuroscience	1990-1995
Athena Neurosciences, member, Scientific Advisory Board	1988-1992

### **Awards, Honors**

Dawson Prize in Genetics, Trinity College Dublin	2011
Reeve-Irvine Research Medal (w/ Marc Tessier-Lavigne)	2006
Ernst & Young Entrepreneur of the Year Finalist	2005
March-of-Dimes Prize in Developmental Biology (w/ Tom Jessell)	2001
Evan Rauch Chair of Neuroscience, U.C. Berkeley	1999-2001
Elected Member, American Philosophical Society	1999
Wakeman Award (w/ Tessier-Lavigne) for Research in Neurosciences	1998
Ameritec Prize for basic research toward a cure for paralysis	1997
Canada Gairdner International Award in Medical Sciences	1997
J. Allyn Taylor International Prize in Medicine (w/ Tom Jessell)	1996
Fondation IPSEN Neuronal Plasticity Prize	
(w/ Marc Tessier-Lavigne and Friedrich Bonhoeffer)	1996
Elected Member, National Academy of Sciences	1995
Elected Fellow, American Academy of Arts and Sciences	1993
W. Alden Spencer Award, Columbia University College of P&S	1992
NIH Javits Neuroscience Investigator Award	1992-1999
Fellow, American Association for the Advancement of Science	1991
Weizmann Scholarship Foundation Award, 3rd Annual	1990
Endowed Chair (5 yr award), Class of 1933, U.C. Berkeley	1987-1992
NIH MERIT Award, NICHD	1985-1995
NIH Javits Neuroscience Investigator Award	1985-1992
McKnight Neuroscience Development Award	1985-1987
Alan T. Waterman Award, National Science Board	1983
Demuth Swiss Medical Res Found., 2nd Inter. Award in Neuroscience	1983
Charles Judson Herrick Award	1982
McKnight Scholars Award	1980-1983
Alfred P. Sloan Research Fellow	1980-1982
Helen Hay Whitney Postdoctoral Fellowship	1977-1979
NSF Predoctoral Fellowship	1972-1975
Phi Beta Kappa, Distinction, Department Honors	1972
G.D. Searle Foundation Scholarship	1968-1972
Ford Foundation Scholarship	1968
President, Illinois Junior Academy of Sciences	1967-1968

### **Endowed and Special Lectures (partial list)**

Bodenstein Lecture, University of Virginia	2001
Lecture at the Nobel Forum, Karolinska Institute, Stockholm	1999

Keynote Lecture, Cell Contact and Adhesion Gordon Conference	1999
Pomerat Lecture, University of Texas Medical Branch, Galveston, Texas	1999
Keynote Lecture, American Soc. for Neurochemistry annual meeting	1999
Nachmansohn Lecture, sponsored by Weizmann Inst.	1998
1998 Grass Lecture, Society for Neuroscience	1998
Runnström Lecture, Stockholm University	1998
Keynote Lecture, Basement Membranes Gordon Conference	1998
Vernon B. Mountcastle Lecture, Johns Hopkins University	1998
Ameritec Foundation Award Lecture, New Orleans	1997
Gairdner Foundation Award Lecture, University of Toronto	1997
Congressional Biomedical Research Caucus, House of Representatives	1997
Grass Lecture, University of Illinois	1997
Jack Sadler Memorial Lecture, University of Colorado	1997
Presidential Symposium, Society for Neuroscience	1995
Burton L. Baker Memorial Lecture, University of Michigan	1995
McClintock Lecture, University of British Columbia	1995
W. Alden Spencer Lecture, Columbia University	1992
Laura J. Kalfayan Memorial Lecture, Univ. North Carolina	1992
Anders Retzius Lecture, Karolinska Institute, Sweden	1991
Albert L. Tester Memorial Lecture, U. Hawaii	1990
Victor Hamburger Lecture, Washington University	1989
NSF Commemorative Lecture, Cell Biology Meeting	1989
Jenkinson Memorial Lecture, Oxford University	1988

### **Editorial Boards**

Science Translational Medicine, Board of Reviewing Editors	2009-
Proceedings of the National Academy of Science, Editorial Board	1999-2000
Molecular and Cellular Neuroscience	1995-2005
Development, Associate Editor	1993-2001
Journal of Cell Biology	1993-1994
Current Biology, Current Opinion in Neurobiology	1992-2002
Mechanisms of Development	1990-2000
Cell Regulation/Molecular Biology of the Cell	1989-1992
J. of Neuroscience, Developmental Neurobiology Co-Section Editor	1989-1993
Neuron	1987-
Science, Board of Reviewing Editors	1986-1996
Cell	1986-1992, 1999-2001
Developmental Biology	1985-1988
Journal of Comparative Neurology	1983-1984
Trends in Neuroscience	1981-1996

### **Patents Approved and Pending (available upon request)**

numerous patents sponsored by U.C. Berkeley approved and pending involving therapeutic applications of Semaphorins, Robos, Slits, and Comms



**Publications: Journal Articles**

1. Scommegna, A., Burd, L., Goodman, C.S., Bieniarz, J., and Seals, C. (1970). The effects of pregnenolone sulfate on uterine contractility. *Amer. J. Obstet. Gynec.* 108, 1023-1029.
2. Goodman, C.S. (1974). Anatomy of locust ocellar interneurons: constancy and variability. *J. comp. Physiol.* 95, 185-201.
3. Goodman, C.S. (1976). Constancy and uniqueness in a large population of small interneurons. *Science* 193, 502-504.
4. Goodman, C.S. (1976). Anatomy of the ocellar interneurons of acridid grasshoppers: I. The large interneurons. *Cell Tiss. Res.* 175, 183-202.
5. Goodman, C.S. and Williams, J.L.D. (1976). Anatomy of the ocellar interneurons of acridid grasshoppers: II. The small interneurons. *Cell Tiss. Res.* 175, 203-225.
6. Heitler, W.J., Goodman, C.S., and Rowell, C.H.F. (1977). The effects of temperature on the threshold of identified neurons in the locust. *J. comp. Physiol.* 117, 163-182.
7. Goodman, C.S. and Heitler, W.J. (1977). Isogenic locusts and genetic variability in the effects of temperature on neuronal threshold. *J. comp. Physiol.* 117, 183-207.
8. Goodman, C.S. (1977). Neuron duplications and deletions in locust clones and clutches. *Science* 197, 1384-1386.
9. Goodman, C.S. (1978). Isogenic grasshoppers: genetic variability in the morphology of identified neurons. *J. comp. Neurol.* 182, 681-706.
10. Heitler, W.J. and Goodman, C.S. (1978). Multiple sites of spike initiation in a bifurcating locust neurone. *J. exp. Biol.* 76, 63-74.
11. Goodman, C.S. and Heitler, W.J. (1979). Electrical properties of spiking and non-spiking insect somata: normal, axotomized, and cholchicine-treated neurons. *J. exp. Biol.* 83, 95-121.
12. Pearson, K.G. and Goodman, C.S. (1979). Correlation of variability in structure with variability in synaptic connections of an identified interneuron. *J. comp. Neurol.* 184, 141-165.
13. Goodman, C.S., Pearson, K.G., and Heitler, W.J. (1979). Variability of identified neurons in grasshoppers. *Comp. Biochem. Physiol.* 64A, 455-462.
14. Goodman, C.S. and Spitzer, N.C. (1979). Embryonic development of identified neurones: differentiation from neuroblast to neurone. *Nature* 280, 208-214.
15. Goodman, C.S., O'Shea, M., McCaman, R.E., and Spitzer, N.C. (1979). Embryonic development of identified neurons: temporal pattern of morphological and biochemical differentiation. *Science* 204, 219-222.
16. Goodman, C.S., Pearson, K.G., and Spitzer, N.C. (1980). Electrical excitability: a spectrum of properties in the progeny of a single embryonic neuroblast. *Proc. Natl. Acad. Sci.* 77, 1676-1680.
17. Goodman, C.S. and Spitzer, N.C. (1981). The mature electrical properties of identified neurons in grasshopper embryos. *J. Physiol.* 313, 369-384.
18. Goodman, C.S. and Spitzer, N.C. (1981). The development of electrical properties of identified neurons in grasshopper embryos. *J. Physiol.* 313, 385-413.
19. Goodman, C.S., Bate, C.M., and Spitzer, N.C. (1981). Embryonic development of identified neurons: origins and transformation of the H cell. *J. Neurosci.* 1, 94-102.
20. Bate, C.M., Goodman, C.S., and Spitzer, N.C. (1981). Embryonic development of identified neurons: segmental differences of the H cell homologues. *J. Neurosci.* 1, 103-106.
21. Pearson, K.G. and Goodman, C.S. (1981). Presynaptic inhibition of transmission from identified interneurons in the locust central nervous system. *J. Neurophysiol.* 45, 501-515.

22. Whittington, P., Bate, M., Seifert, E., Ridge, K., and Goodman, C.S. (1982). Survival and differentiation of identified embryonic neurons in the absence of their target muscles. *Science* 215, 973-975.
23. Goodman, C.S., Raper, J.A., Ho, R., and Chang, S. (1982). Pathfinding by neuronal growth cones in grasshopper embryos. *Symp. Soc. Dev. Biol.* 40, 275-316.
24. Goodman, C.S., Raper, J.A., Chang, S., and Ho, R. (1982). Grasshopper growth cones: divergent choices and labeled pathways. *Progress in Brain Research* 58, 283-304.
25. Ho, R.K. and Goodman, C.S. (1982). Peripheral pathways are pioneered by an array of central and peripheral neurones in grasshopper embryos. *Nature* 297, 404-406.
26. Shankland, M. and Goodman, C.S. (1982). Development of the dendritic branching pattern by the medial giant interneuron in grasshopper embryos. *Dev. Biol.* 92, 489-506.
27. Shankland, M., Bentley, D., and Goodman, C.S. (1982). Afferent innervation shapes the dendritic branching pattern of the medial giant interneuron in grasshopper embryos raised in culture. *Dev. Biol.* 92, 507-520.
28. Taghert, P., Bastiani, M., Ho, R.K., and Goodman, C.S. (1982). Guidance of pioneer growth cones: filopodial contacts and coupling revealed with an antibody to Lucifer Yellow. *Dev. Biol.* 94, 391-399.
29. Ho, R.K., Ball, E.E., and Goodman, C.S. (1982). Muscle pioneers: large mesodermal cells that erect a scaffold for developing muscles and motoneurons in grasshopper embryos. *Nature* 301, 66-69.
30. Raper, J.A., Bastiani, M.J., and Goodman, C.S. (1983). Pathfinding by neuronal growth cones in grasshopper embryos: I. Divergent choices made by the growth cones of sibling neurons. *J. Neuroscience* 3, 20-30.
31. Raper, J.A., Bastiani, M.J., and Goodman, C.S. (1983). Pathfinding by neuronal growth cones in grasshopper embryos: II. Selective fasciculation onto specific axonal pathways. *J. Neuroscience* 3, 31-41.
32. Chang, S., Ho, R., and Goodman, C.S. (1983). Selective groups of neuronal and mesodermal cells recognized early in grasshopper embryogenesis by a monoclonal antibody. *Dev. Br. Res.* 9, 297-304.
33. Loer, C.M., Steeves, J.D., and Goodman, C.S. (1983). Neuronal cell death in grasshopper embryos: variable patterns in different species, clutches, and clones. *J. Exp. Embryol. Morph.* 78, 169-182.
34. Taghert, P.H. and Goodman, C.S. (1984). Cell determination and differentiation of identified serotonin-containing neurons in the grasshopper embryo. *J. Neurosci.* 4, 989-1000.
35. Bastiani, M.J. and Goodman, C.S. (1984). Neuronal growth cones: specific interactions mediated by filopodial insertion and induction of coated vesicles. *P.N.A.S.* 81, 1849-1853.
36. Taghert, P.H., Doe, C.Q., and Goodman, C.S. (1984). Cell determination and regulation during development of neuroblasts and neurons in the grasshopper embryo. *Nature* 307, 163-165.
37. Berlot, J. and Goodman, C.S. (1984). Guidance of peripheral pioneer neurons in the grasshopper: an adhesive hierarchy of epithelial and neuronal surfaces. *Science* 223, 293-295.
38. Thomas, J.B., Bastiani, M.J., Bate, C.M., and Goodman, C.S. (1984). From grasshopper to *Drosophila*: a common plan for neuronal development. *Nature* 310, 203-207.
39. Bastiani, M.J., Raper, J.A., and Goodman, C.S. (1984). Pathfinding by neuronal growth cones in grasshopper embryos. III. Selective affinity of the G growth cone for the P cells within the A/P fascicle. *J. Neurosci.* 4, 2311-2328.



40. Raper, J.A., Bastiani, M.J., and Goodman, C.S. (1984). Pathfinding by neuronal growth cones in grasshopper embryos. IV. The effects of ablating the A and P axons upon the behavior of the G growth cone. *J. Neurosci.* 4, 2329-2345.
41. Kotrla, K.J. and Goodman, C.S. (1984). Transient expression of a surface antigen on a small subset of neurons during embryonic development. *Nature* 311, 151-153.
42. Bastiani, M.J., Pearson, K.G., and Goodman, C.S. (1984). From embryonic fascicles to adult tracts: organization of neuropil from a developmental perspective. *J. Exp. Biol.* 112, 45-64.
43. Goodman, C.S., Bastiani, M.J., Doe, C.Q., du Lac, S., Helfand, S.L., Kuwada, J.Y., Thomas, J.B. (1984). Cell recognition during neuronal development. *Science* 225, 1271-1279.
44. Pearson, K.G. and Boyan, G.S., Bastiani, M.J., and Goodman, C.S. (1985). Heterogeneous properties of segmentally homologous interneurons in the ventral nerve cord of locusts. *J. Comp. Neurol.* 233, 133-145.
45. Ball, E.E., Ho, R.K., and Goodman, C.S. (1985). Development of neuromuscular specificity in the grasshopper embryo: guidance of motoneuron growth cones by muscle pioneers. *J. Neurosci.* 5, 1808-1819.
46. Kuwada, J.Y. and Goodman, C.S. (1985). Neuronal determination during embryonic development of the grasshopper nervous system. *Dev. Biol.* 110, 114-126.
47. Doe, C.Q. and Goodman, C.S. (1985). Early events in insect neurogenesis: I. Development and segmental differences in the pattern of neuronal precursor cells. *Dev. Biol.* 111, 193-205.
48. Doe, C.Q. and Goodman, C.S. (1985). Early events in insect neurogenesis: II. The role of cell interactions and cell lineage in the determination of neuronal precursor cells. *Dev. Biol.* 111, 206-219.
49. Ball, E.E., Ho, R.K., and Goodman, C.S. (1985). Muscle development in the grasshopper embryo: I. Muscles, nerves, and apodemes in the metathoracic leg. *Dev. Biol.* 111, 383-398.
50. Ball, E.E. and Goodman, C.S. (1985). Muscle development in the grasshopper embryo: II. Syncytial origin of the extensor tibiae muscle pioneers. *Dev. Biol.* 111, 399-416.
51. Ball, E.E. and Goodman, C.S. (1985). Muscle development in the grasshopper embryo: III. Sequential origin of the flexor tibiae muscle pioneers. *Dev. Biol.* 111, 417-424.
52. Doe, C.Q., Kuwada, J.Y., and Goodman, C.S. (1985). From epithelium to neuroblasts to neurones: the role of cell interactions and cell lineage during insect neurogenesis. *Phil. Trans. R. Soc. Lond. B*, 312, 67-81.
53. (from laboratory) Kuwada, J.Y. (1986). Cell recognition by neuronal growth cones in a simple vertebrate embryo. *Science* 233, 740-746.
54. Bastiani, M.J., du Lac, S., and Goodman, C.S. (1986). Guidance of neuronal growth cones in the grasshopper embryo. I. Recognition of a specific axonal pathway by the pCC neuron. *J. Neurosci.* 6, 3518-3531.
55. du Lac, S., Bastiani, M.J., and Goodman, C.S. (1986). Guidance of neuronal growth cones in the grasshopper embryo. II. Recognition of a specific axonal pathway by the aCC neuron. *J. Neurosci.* 6, 3532-3541.
56. Bastiani, M.J. and Goodman, C.S. (1986). Guidance of neuronal growth cones in the grasshopper embryo. III. Recognition of specific glial pathways. *J. Neurosci.* 6, 3542-3551.
57. Doe, C.Q., Bastiani, M.J., and Goodman, C.S. (1986). Guidance of neuronal growth cones in the grasshopper embryo. IV. Temporal delay experiments. *J. Neurosci.* 6, 3552-3563.

58. Bastiani, M.J., Harrelson, A.L., Snow, P.M., and Goodman, C.S. (1987). Expression of fasciclin I and II glycoproteins on subsets of axon pathways during neuronal development in the grasshopper. *Cell* 48, 745-755.
59. Snow, P.M., Patel, N.H., Harrelson, A.L., and Goodman, C.S. (1987). Neural-specific carbohydrate moiety shared by many surface glycoproteins in *Drosophila* and grasshopper embryos. *J. Neurosci.* 7, 4137-4144.
60. Patel, N.H., Snow, P.M., and Goodman, C.S. (1987). Characterization and cloning of fasciclin III: a glycoprotein expressed on a subset of neurons and axon pathways in *Drosophila*. *Cell* 48, 975-988.
61. Montell, D.J., and Goodman, C.S. (1988). *Drosophila* substrate adhesion molecule: sequence of laminin B1 chain reveals domains of homology with mouse. *Cell* 53, 463-473.
62. Thomas, J.B., Crews, S.T., and Goodman, C.S. (1988). Molecular genetics of the *single-minded* locus: a gene involved in the development of the *Drosophila* nervous system. *Cell* 52, 133-141.
63. Crews, S.T., Thomas, J.B., and Goodman, C.S. (1988). The *Drosophila single-minded* gene encodes a nuclear protein with sequence similarity to the *per* gene product. *Cell* 52, 143-151.
64. Doe, C.Q., Hiromi, Y., Gehring, W.J., and Goodman, C.S. (1988). Expression and function of the segmentation gene *fushi tarazu* during *Drosophila* neurogenesis. *Science* 239, 170-175.
65. Smouse, D., Goodman, C.S., Mahowald, A.P., and Perrimon, N. (1988). *Polyhomeotic*: a gene required for the embryonic development of axon pathways in the central nervous system of *Drosophila*. *Genes and Develop.* 2, 830-842.
66. Snow, P.M., Zinn, K., Harrelson, A.L., McAllister, L., Schilling, J., Bastiani, M.J., Makk, G., and Goodman, C.S. (1988). Characterization and cloning of fasciclin I and fasciclin II glycoproteins in the grasshopper. *Proc. Natl. Acad. Sci. USA* 85, 5291-5295.
67. Zinn, K., McAllister, L., and Goodman, C.S. (1988). Sequence and expression of fasciclin I in grasshopper and *Drosophila*. *Cell* 53, 577-587.
68. Doe, C.Q., Smouse, D., and Goodman, C.S. (1988). Control of neuronal fate by the *Drosophila* segmentation gene *even-skipped*. *Nature* 333, 376-378.
69. Harrelson, A.L., and Goodman, C.S. (1988). Growth cone guidance in insects: fasciclin II is a member of the immunoglobulin superfamily. *Science* 242, 700-708.
70. Jacobs, J.R., and Goodman, C.S. (1989). Embryonic development of axon pathways in the *Drosophila* CNS: I. A glial scaffold appears before the first growth cones. *J. Neurosci.* 9, 2402-2411.
71. Jacobs, J.R., and Goodman, C.S. (1989). Embryonic development of axon pathways in the *Drosophila* CNS: II. Behavior of pioneer growth cones. *J. Neurosci.* 9, 2412-2422.
72. Patel, N.H., Schafer, B., Goodman, C.S., and Holmgren, R. (1989). The role of segment polarity genes during *Drosophila* neurogenesis. *Genes and Develop.* 3, 890-904.
73. Montell, D.J., and Goodman, C.S. (1989). *Drosophila* laminin: sequence of B2 subunit and expression of all three subunits during embryogenesis. *J. Cell Biol.* 109, 2441-2453.
74. Jacobs, J.R., Hiromi, Y., Patel, N.H., and Goodman, C.S. (1989). Lineage, migration, and morphogenesis of longitudinal glia in the *Drosophila* CNS as revealed by a molecular lineage marker. *Neuron* 2, 1625-1631.
75. Patel, N.H., Martin-Blanco, E., Coleman, K.G., Poole, S.J., Ellis, M.C., Kornberg, T.B., and Goodman, C.S. (1989). Expression of engrailed proteins in arthropods, annelids, and chordates. *Cell*, 58, 955-968.

76. Patel, N.H., Kornberg, T.B., and Goodman, C.S. (1989). Expression of engrailed during segmentation in grasshopper and crayfish. *Development* 107, 201-212.
77. Snow, P.M., Bieber, A.J., and Goodman, C.S. (1989). Fasciclin III: a novel homophilic adhesion molecule in *Drosophila*. *Cell* 59, 313-323.
78. Bieber, A.J., Snow, P.M., Hortsch, M., Patel, N.H., Jacobs, J.R., Traquina, Z., Schilling, J., and Goodman, C.S. (1989). *Drosophila* neuroglian: a member of the immunoglobulin superfamily with extensive homology to the vertebrate neural adhesion molecule L1. *Cell* 59, 447-460.
79. Mlodzik, M., Hiromi, Y., Weber, U., Goodman, C.S., and Rubin, G.M. (1990). The *Drosophila seven-up* gene, a member of the steroid receptor gene superfamily, controls photoreceptor cell fates. *Cell* 60, 211-224.
80. Elkins, T., Zinn, K., McAllister, L., Hoffmann, F.M., and Goodman, C.S. (1990). Genetic analysis of a *Drosophila* neural cell adhesion molecule: interaction of fasciclin I and Abelson tyrosine kinase mutations. *Cell* 60, 565-575.
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